

August 17, 1998

Roger Bourgeois, President

LOUISIANA AUTOMATIC FIRE ALARM ASSOCIATION

Station 1 - Box 10157

Houma, LA 70363

**RE: Surge Protection for Fire Alarm Systems
Interconnecting Two or More Buildings**

Dear Mr. Bourgeois:

Many members of your association have expressed concerns as to how to handle surges caused by lightning strikes on fire alarm initiating devices circuits and/or notification appliance circuits that are extended beyond one building, because such strikes tend to damage not only the control panel but also a number of initiating devices and/or notification appliances. Currently, Underwriter's Laboratory only lists surge protection devices to handle surges on A/C power supply - UL 1449 and surges on communication circuits - UL 497. Unfortunately, UL does not specifically list surge protection devices to protect fire alarm equipment from lightning strikes on system circuitry. Therefore, after numerous telephone calls to the technical staffs of NFPA 70 and 72, it appears that the National Electrical Code is able to provide a solution to this particular problem.

Article 760-7 of the National Electrical Code requires "fire alarm circuits that extend beyond one building shall either meet the requirements of Article 800 and be classified as communications circuits or shall meet the requirements of Article 225."

Basically, this section of the code is allowing fire alarm circuits extending between buildings to be viewed as communications circuits in accordance with Article 800. Unfortunately, Article 225 - Outside Branch Circuits and Feeders does not specifically address protection from lightning exposure. Therefore, your only option is using the requirements of Article 800.

Article 800-30(a) requires a "listed" primary protector to be provided on each circuit - aerial or underground upon entering the building to protect the control panel and associated fire alarm devices located in the building from surges caused by lightning strikes.

Therefore, it is the interpretation of this office that fire alarm circuits extending beyond the boundaries of a building to connect another building shall be viewed as communication circuits pursuant to Article 70:760-7 and those circuits will be allowed to have surge protection devices listed in accordance with UL 497, installed to provide lightning protection, pursuant to Article 70:800.

If you should have further questions, please feel free to contact this office.

Sincerely,

Jerry W. Jones
Deputy Assistant Secretary/Chief Architect

JWJ/MCM/adg

cc: Plan Review Staff
Patricia Slaughter
Louisiana Fire Alarm Association